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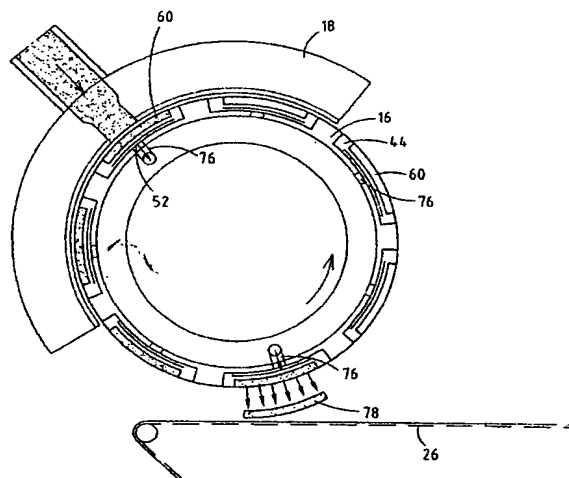
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(54) Title: METHOD AND MOULDING DEVICES FOR MOULDING THREE-DIMENSIONAL PRODUCTS



(57) Abstract: The invention provides a method for moulding three-dimensional products from a mass of foodstuff starting materials which are suitable for consumption, in particular a meat mass. The method comprises the steps of filling a mould cavity (60), which is open on one side, with the mass of foodstuff starting materials which are suitable for consumption, which mould cavity (60) is defined by a boundary comprising walls (66) and base (68), in order to mould a moulded three-dimensional product, and the removal of the moulded three-dimensional product from the mould cavity. In the method according to the invention, during removal the adhesion forces between the moulded product (78) and the boundary are eliminated virtually simultaneously along all the interfaces.

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INTERNATIONAL SEARCH REPORT

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A. CLASSIFICATION OF SUBJECT MATTER
IPC 7 A22C7/00 A23P1/10

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

IPC 7 A22C A23P A21C

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

EPO-Internal, PAJ, WPI Data

C. DOCUMENTS CONSIDERED TO BE RELEVANT

| Category * | Citation of document, with indication, where appropriate, of the relevant passages | Relevant to claim No. |
|------------|--|-----------------------|
| X | US 3 205 837 A (FAY RUDOLPH J) 14 September 1965 (1965-09-14) column 1, line 26 - line 54 column 2, line 43 - column 3, line 65; claims; figures | 1-6, 8-16,18 |
| X | US 4 212 609 A (FAY RUDOLPH J) 15 July 1980 (1980-07-15) cited in the application | 1-6, 8-12,18 |
| Y | column 1, line 24 - column 2, line 15 column 4, line 26 - line 41; claims; figures | 17 |
| Y | PATENT ABSTRACTS OF JAPAN vol. 2002, no. 02, 2 April 2002 (2002-04-02) & JP 2001 299317 A (KIBUN FOODS INC), 30 October 2001 (2001-10-30) abstract; figures | 17 |

☐ Further documents are listed in the continuation of box C.

☒ Patent family members are listed in annex.

* Special categories of cited documents :

- "A" document defining the general state of the art which is not considered to be of particular relevance
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- "O" document referring to an oral disclosure, use, exhibition or other means
- "P" document published prior to the international filing date but later than the priority date claimed

- "T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention
- "X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
- "Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art
- "&" document member of the same patent family

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INTERNATIONAL SEARCH REPORT

International application No.
PCT/NL 03/00470

Box I Observations where certain claims were found unsearchable (Continuation of Item 1 of first sheet)

This International Search Report has not been established in respect of certain claims under Article 17(2)(a) for the following reasons:

1. ☐ Claims Nos.:
because they relate to subject matter not required to be searched by this Authority, namely:
2. ☐ Claims Nos.:
because they relate to parts of the International Application that do not comply with the prescribed requirements to such an extent that no meaningful International Search can be carried out, specifically:
3. ☐ Claims Nos.:
because they are dependent claims and are not drafted in accordance with the second and third sentences of Rule 6.4(a).

Box II Observations where unity of invention is lacking (Continuation of Item 2 of first sheet)

This International Searching Authority found multiple inventions in this international application, as follows:

see additional sheet

1. ☐ As all required additional search fees were timely paid by the applicant, this International Search Report covers all searchable claims.
2. ☐ As all searchable claims could be searched without effort justifying an additional fee, this Authority did not invite payment of any additional fee.
3. ☐ As only some of the required additional search fees were timely paid by the applicant, this International Search Report covers only those claims for which fees were paid, specifically claims Nos.:
4. ☒ No required additional search fees were timely paid by the applicant. Consequently, this International Search Report is restricted to the invention first mentioned in the claims; it is covered by claims Nos.:

1 to 18 and 41 to 48

Remark on Protest

- ☐ The additional search fees were accompanied by the applicant's protest.
- ☐ No protest accompanied the payment of additional search fees.

FURTHER INFORMATION CONTINUED FROM PCT/ISA/ 210

This International Searching Authority found multiple (groups of) inventions in this international application, as follows:

1. claims: 1 to 18 and 41 to 48 (insofar they are dependent on claim 1 or 8),

directed to a method and a device for moulding with means for applying a medium for eliminating adhesion forces.

2. claims: 19 to 26 and 41 to 48 (insofar they are dependent on claim 19),

directed to a moulding device with a flexible premould.

3. claims: 27 to 33,

directed to a strip and an assembly of the strip suitable for use in a moulding device.

4. claims: 34 to 40 and 41 to 48 (insofar they are dependent on claim 34),

directed to a moulding device with a large number of openings provided in the boundary.

5. claims: 49 to 50,

directed to a release device.

6. claims: 51 to 55,

directed to a mass feed member.

7. claims: 56 to 62,

directed to a moulding surface and an assembly of at least two moulding surfaces.

INTERNATIONAL SEARCH REPORT

Inte al Application No
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| Patent document cited in search report | | Publication date | Patent family member(s) | Publication date |
|---|---|---------------------|----------------------------|---------------------|
| US 3205837 | A | 14-09-1965 | GB 973140 A | 21-10-1964 |
| US 4212609 | A | 15-07-1980 | NONE | |
| JP 2001299317 | A | 30-10-2001 | NONE | |